WHAT IS CLAIMED IS:

1. A device manufacturing apparatus which has a plurality of objects to be temperature-adjusted, comprising

a plurality of temperature adjustment systems which respectively temperature-adjust the plurality of objects to be temperature-adjusted,

wherein said plurality of temperature adjustment systems include

a first temperature adjustment system which uses any one coolant selected from the group consisting of pure water, a fluorine-based inert solution, a gas, and an antifreeze, and

a second temperature adjustment system which uses any one coolant which is selected from the group consisting of pure water, a fluorine based inert solution, a gas, and an antifreeze and is different from the coolant used by the first temperature adjustment system.

2. The apparatus according to claim 1, wherein the first temperature adjustment system uses pure water as a coolant and has an impurity removing unit which removes an impurity in the pure water.

3. The apparatus according to claim 1, wherein the first temperature adjustment system is constituted by a closed path.

4. The apparatus according to claim 1, wherein at

least some of said plurality of t mperature adjustment systems are arranged to operate independently.

5. The apparatus according to claim 1, wherein each of said plurality of temperature adjustment systems includes

a temperature detection section which detects a temperature of a coolant, and

a temperature controller which controls the temperature of the coolant on the basis of a temperature detected by the temperature detection section.

6. The apparatus according to claim 1, wherein the apparatus is configured as an exposure apparatus further including an exposure section which exposes a substrate to a pattern.

7. The apparatus according to claim 6, wherein

the exposure section includes

a projection system which projects the pattern onto the substrate, and

a stage device which has a driving section, and

the first temperature adjustment system is arranged to temperature-adjust the driving section, and the second temperature adjustment system is arranged to temperature-adjust the projection system.

8. The apparatus according to claim 6, wherein said plurality of temp rature adjustment systems include a third t mperature adjustment syst m which

temperature-adjusts temperature adjustment air that circulates through the exposure section, and the third temperature adjustment system is arranged to use, as a coolant for temperature-adjusting the temperature adjustment air, a coolant different from a coolant used by the first and second temperature adjustment systems.

9. A device manufacturing method comprising a step of processing a substrate by a device manufacturing apparatus as defined in claim 1.

10. A device manufacturing method comprising a step of transferring a pattern onto a substrate using a device manufacturing apparatus as defined in claim 6.